To: Hammerschmidt, Ron[Hammerschmidt.Ron@epa.gov]; Tapia, Cecilia[Tapia.Cecilia@epa.gov]; Hood, Rich[Hood.Rich@epa.gov]; Kring, Debbie[kring.debbie@epa.gov]; Whitley, Christopher[Whitley.Christopher@epa.gov]; Gravatt, Dan[Gravatt.Dan@epa.gov]
From: Hatch, Sarah
Sent: Thur 6/20/2013 7:54:46 PM
Subject: FW: West Lake Landfill APPEARS TO BE AN EMERGANCY
2013_06_17_Fire_Report.pdf

From: Harvey Ferdman [mailto:HarveyFerdman@aol.com]
Sent: Thursday, June 20, 2013 2:38 PM
To: Hatch, Sarah; Christopher.Clayton@hq.doe.gov; Kerry_DeGregorio@Blunt.Senate.gov; Gary_Gorski@McCaskill.senate.gov; Lou.Aboussie@mail.house.gov; Brecht.Mulvihill@mail.house.gov
Cc: Bill.Otto@house.mo.gov; Shawn.Muenks@dnr.mo.gov; Branden.Doster@dnr.mo.gov; Joan.Gummels@ago.mo.gov; Christopher.Nagel@dnr.mo.gov
Subject: West Lake Landfill APPEARS TO BE AN EMERGANCY

FYI, the MDNR Landfill Fire Expert is calling for construction of a firewall between the fire and the North Quarry (home of Area 1) within the next 60 days!

Attached is a report from the Missouri Department of Naturals Resources landfill fire expert dated June 17, 2013.

In his General Findings section, it is stated that the fire is advancing northward at the rate of 1 to 2 feet per day, down from 3 feet per day. Note that Area 1 is currently around 1000 feet from the leading edge of the fire, and less than1000 feet from the heat/steam front. There are uncertainties in just how close to Area 1 it may be due to scarcity of CO2 monitoring probes in that area. This raises concerns that Republic (the landfill operator) and MDNR did not expect the fire to spread this far this fast!

The expert's report voices concern that the proximity of Area 1, given the approach the Operator has chosen to contain the fire, i.e., not following his repeated recommendations to isolate the South Quarry from the North Quarry, may cause the dump operator to have to dig into the garbage to erect an additional firewall which in turn will create an immediate exposure of the community to documented toxins that include dioxins as well as odors so distressing that many have been temporarily relocated out of the area.

MO DNR's expert's recommendations issued Monday June 17th are pasted in below for your convenience. Please read #3, 4, and especially 12 and 13 in which **he is calling for the erection of a fire wall within 60 days of this report**.

What can the EPA and/or DOE/FUSRAP do to help this community given that may feel that it would be preferable to remove Area 1 over trenching and erecting a firewall in the garbage.

It is our understanding that the EPA has a procedure for an Emergency Removal Action. Please provide documentation of the criteria for such an action and the procedure for it to be invoked. It will also be appreciated if you let us know of any other expedited methods to help this community remove this immediate threat to its wellbeing and to allow the fire fighters to focus on the fire without the being impeded by the presence of Area 1.

Sincerely,

Harvey

Harvey Ferdman

Policy Advisor to

Missouri State Representative Bill Otto, District 70

St. Louis, MO 63017

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RECOMMENDATIONS

The following is a summary of the preliminary recommendations at the Bridgeton Sanitary Landfill.

1. The operator should continue installing the temporary cover/cap in the South Quarry in an expedited manner. The cap is a key component in meeting the objective of reducing odors and minimizing oxygen intrusion.

2. Per the North Quarry Contingency Plan in the Order, the operator should install a line of five to six TMPs capable of measuring 500°F to the northeast of TMP line 1 through 4. All components used in constructing of the TMPs shall be able to withstand temperatures up to 500°F. The line of new TMPs should be placed 25 to 50 feet off center of TMP line 1 through 4. The operator should also install a line of monitoring wells 25 to 50 feet on center that are screened for two to three elevations in the North Quarry 50 feet from TMP line 1 through 4. The screening levels should be defined by the average depth of the waste divided into thirds unless the depth is less than 100 feet, then only two screened levels would be

necessary.

3. The combined well and TMP monitoring line should be used as a sentry line; if any of the pre-defined criteria are exceeded, the operator shall immediately implement a fire break/isolation barrier between the North Quarry Landfill and Operable Unit 1, the Radiological Unit.

4. The operator and DNR should agree within the time frames in the established order on a set of pre-defined criteria that will immediately require the implementation and construction of the fire break/isolation barrier between the North Quarry Landfill and Operable Unit 1, the Radiological Unit. The criteria should be based on a sustained temperature and/or CO level, such as detailed in Table 2.

5. To allow for enhanced analysis of the sentry line, temperatures and gas (i.e., CO, methane, hydrogen, etc.) data logs and maps should be collected and provided no less than weekly to DNR.

6. The operator should submit designs for the fire break/isolation barrier between the North Quarry and Operable Unit 1, the Radiological Unit, within the time frames in the established order. The design should completely isolate potentially combustible materials between the Bridgeton Landfill and Operable Unit 1.

7. The additional oxygen concentrations as shown in Figures 2 and 3 may increase the potential rate of spread and should be kept below the 5% NSPS limit for all interior gas extraction wells.

8. In facilities with smoldering events, it is recommended the oxygen concentration for all interior gas extraction wells be kept below 1%.

9. In areas where the gas or waste temperatures exceed 180°F, the oxygen concentrations in the waste mass should be kept below 1% and optimally it should be kept below 0.5% for an interior gas extraction well.

10. All wells in the North Quarry should be kept to below 1% oxygen.

11. Excessive oxygen in the waste prisms should be avoided. While landfill odors can be a driving factor in increasing the vacuum on a gas collection system, the operator should examine the design and operation of the gas collection system first and keep “overdraw” conditions to a minimum.

12. While I understand from discussions with DNR staff that Republic Services previously rejected Dr. Stark’s January 22, 2013, vertical barrier wall design at the border of the neck and North Quarry, based on the latest data markers, there appears to be a small construction window to install this barrier and reduce the likelihood of this smoldering event impacting the North Quarry.

13. I would again recommend the operator start the construction of a vertical barrier wall in the narrow portion of the landfill within 60 days of this report unless new data indicates the reaction is in the North Quarry or the rate at which the reaction is expanding would interfere with completion of the wall construction. The vertical barrier wall should also incorporate a set of 8 to12 gas carbon dioxide, injection wells as a failsafe.

14. Based on the data conditions above, site conditions, fire science, and engineering, I do not recommend allowing the North Quarry to be used as a fire break from the Radiological Unit. There are a number of reasons why the reaction should be contained to the South Quarry, of primary concern is allowing the North Quarry, an unknown waste mass, to react over time and assume it will respond the same as the South Quarry. The impact to the community from another long term landfill gas exposure must be considered and accounted for in making this decision. All attempts to contain the smoldering and heating event should be done at the narrow portion of the facility. The operator should be required to use all available technology to contain the reaction in the South Quarry and allow no advancement through the neck area into the North Quarry.

15. If Republic Services once again elects not to install the vertical barrier wall put forward by Dr. Stark, a third set of gas interceptor wells at distance of 25% less than previously installed TMP line GIW-8 to GIW-13 or the addition of 8 to 9 GIW should be installed within 45 days of this report to contain the reaction.

16. I also recommend the North Quarry be capped with the same cover system being applied in the South Quarry to further reduce the possibility of oxygen intrusion into the waste mass and to minimize odors.

17. Gas temperature data from the GIW system should be plotted and submitted weekly to DNR until all the data shows a decreasing trend and all gas temperatures are below 165°F.

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